

## Calibration and Model Validation

The planning area was divided into quadrants using an east-west screenline and a north-south screenline. The first screenline runs from the southern planning area boundary to US 15-401, travels through downtown Laurinburg, then crosses the northern planning area boundary following the Laurinburg and Southern railway. The second screenline begins at the western planning area boundary following the Seaboard Coastline railway to the eastern planning area boundary. These screenlines are imaginary lines running through the planning area that were used to check the volume of travel dispersing throughout the traffic model.

The screenlines, as illustrated in **Figure 13**, were chosen in conjunction with the determination of the planning area. Traffic counts were taken at each location where a roadway crossed the screenline or cordon line. In addition, additional counts were taken at locations throughout the planning area to help determine travel patterns and validate the model.

Once the model distributed trips across the network using an all-or-nothing loading assignment, the assigned volumes were compared to actual ground counts across the two screenlines. The model is considered to be calibrated when the computer generated screenline totals are within 10% of the actual ground counts. The screenline comparisons are summarized in **Table 13**.

<b>Table 13. Model Validation</b>			
<b>Screenline</b>	<b>Actual Count</b>	<b>Model Volume</b>	<b>Difference</b>
East - West	40,270	40,764	1%
North - South	25,222	22,996	9%

## Data Projections

Once the calibration of the base year model was complete, anticipated design year traffic conditions were simulated by projecting the internal, external, and through trips to the 2025 design year. The future internal trips were estimated by projecting the housing and employment data to the design year and then allocating these projections to individual traffic analysis zones. The projections were developed based upon historical trends for Scotland County, Laurinburg and East Laurinburg, and coordination with the local government. The allocation of these projections was coordinated with the City of Laurinburg Planning Department, and was based upon the existing and anticipated development throughout the planning area. Future external and through trips for the 2025 design year were projected from the base year traffic using a linear projection of past growth rates and knowledge of the area's development patterns.

For the design year analysis, an increase in the generation rates was determined as follows: